

Amendments to the Claims

Claims 1 - 6 (canceled)

1 Claim 7 (currently amended): A computer program product for improving performance and
2 resource utilization of software applications that interact with a back-end data source to update
3 information stored therein, the computer program product embodied on one or more computer-
4 readable media and comprising:

5 computer-readable program code ~~[[means]]~~ for storing one or more objects in a cache for
6 responding to update requests against a back-end data source corresponding to each of the
7 objects, wherein (1) a set of input properties is stored with or associated with each stored object
8 and (2) update logic specifying how to update the back-end data source corresponding to each of
9 the stored objects is stored with or associated with the stored object or a group of stored objects;

10 computer-readable program code ~~[[means]]~~ for receiving update requests against the
11 back-end data source for one or more of the objects;

12 computer-readable program code ~~[[means]]~~ for checking an update policy to determine an
13 update mode to use for ~~[[a]]~~ each selected one of the update-request requests, responsive to the
14 computer-readable program code ~~[[means]]~~ for receiving;

15 computer-readable program code ~~[[means]]~~ for immediately processing the selected
16 update request against the back-end data source if the determined update mode is not a delayed
17 update mode; and

18 computer-readable program code ~~[[means]]~~ for delaying processing of the selected update
19 request against the back-end data source ~~otherwise is the delayed update mode, further~~

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20 comprising:
21 computer-readable program code for queuing the selected update request, along
22 with the input properties and values thereof which are to be used for performing the selected
23 update request, as a queued update request on an update queue;
24 computer-readable program code for detecting a triggering event for performing
25 the delayed processing of the queued update requests, wherein the triggering event comprises
26 reaching a particular count of queued update requests for a selected object; and
27 computer-readable program code for performing, responsive to the computer-
28 readable program code for detecting, the queued update requests.

Claim 8 (canceled)

1 Claim 9 (currently amended): The computer program product according to Claim [[8]] 7,
2 wherein the computer-readable program code [[means]] for performing further comprises:
3 computer-readable program code [[means]] for setting the input properties of a selected
4 object against which the queued update request is to be performed using the queued input
5 property values; and
6 computer-readable program code [[means]] for executing the update logic stored with or
7 associated with the selected object, thereby updating the back-end data source corresponding to
8 the selected object.

Claim 10 (canceled)

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1 Claim 11 (currently amended): The computer program product according to Claim [[8]] 7,
2 wherein the triggering event further comprises reaching a particular time of day.

1 Claim 12 (currently amended): The computer program product according to Claim [[8]] 7,
2 wherein the triggering event comprises instead reaching a count of read requests received for an
3 associated a read-access object which is used for responding to read requests and which is
4 associated with a selected one of the objects for which at least one of the update requests is
5 queued.

1 Claim 13 (currently amended): The computer program product according to Claim [[8]] 7,
2 wherein a separate update queue is created for each of one or more back-end data sources to be
3 accessed during operation of the computer-readable program code [[means]] for performing.

1 Claim 14 (currently amended): The computer program product according to Claim 7, wherein
2 the update policy selects computer-readable program code means for determining further
3 comprises computer-readable program code means for selecting the delayed update mode based
4 upon a time of day when the selected update request is received.

1 Claim 15 (currently amended): The computer program product according to Claim 7, wherein
2 the update policy selects computer-readable program code means for determining further
3 comprises computer-readable program code means for selecting the delayed update mode based

4 upon a classification of a user making the selected update request.

1 Claim 16 (currently amended): The computer program product according to Claim [[8]] 7,
2 further comprising:

3 computer-readable program code [[means]] for connecting to the back-end data source
4 prior to operation of the computer-readable program code [[means]] for performing; and
5 computer-readable program code [[means]] for disconnecting from the back-end data
6 source after operation of the computer-readable program code [[means]] for performing.

Claims 17 - 22 (canceled)

1 Claim 23 (currently amended): A system for improving performance and resource utilization of
2 software applications that interact with a back-end data source to update information stored
3 therein, comprising:

4 means for storing one or more objects in a cache for responding to update requests against
5 a back-end data source corresponding to each of the objects, wherein (1) a set of input properties
6 is stored with or associated with each stored object and (2) update logic specifying how to update
7 the back-end data source corresponding to each of the stored objects is stored with or associated
8 with the stored object or a group of stored objects;

9 means for receiving update requests against the back-end data source for one or more of
10 the objects;

11 means for checking an update policy to determine an update mode to use for [[a]] each

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12 selected one of the update request requests, responsive to the means for receiving;
13 means for immediately processing the selected update request against the back-end data
14 source if the determined update mode is not a delayed update mode; and
15 means for delaying processing of the selected update request against the back-end data
16 source otherwise is the delayed update mode, further comprising:
17 means for queuing the selected update request, along with the input properties and
18 values thereof which are to be used for performing the selected update request, as a queued
19 update request on an update queue;
20 means for detecting a triggering event for performing the delayed processing of
21 the queued update requests, wherein the triggering event comprises reaching a particular count of
22 queued update requests for a selected object; and
23 means for performing, responsive to the means for detecting, the queued update
24 requests.

Claim 24 (canceled)

1 Claim 25 (currently amended): The system according to Claim [[24]] 23, wherein the means for
2 performing further comprises:

3 means for setting the input properties of a selected object against which the queued
4 update request is to be performed using the queued input property values; and
5 means for executing the update logic stored with or associated with the selected object,
6 thereby updating the back-end data source corresponding to the selected object.

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Claim 26 (canceled)

1 Claim 27 (currently amended): The system according to Claim [[24]] 23, wherein the triggering
2 event further comprises reaching a particular time of day.

1 Claim 28 (currently amended): The system according to Claim [[24]] 23, wherein the triggering
2 event comprises instead reaching a count of read requests received for ~~an associated~~ a read-
3 access object which is used for responding to read requests and which is associated with a
4 selected one of the objects for which at least one of the update requests is queued.

1 Claim 29 (currently amended): The system according to Claim [[24]] 23, wherein a separate
2 update queue is created for each of one or more back-end data sources to be accessed during
3 operation of the means for performing.

1 Claim 30 (currently amended): The system according to Claim 23, wherein the update policy
2 selects ~~means for determining further comprises means for selecting the delayed update mode~~
3 based upon a time of day when the selected update request is received.

1 Claim 31 (currently amended): The system according to Claim 23, wherein the update policy
2 selects ~~means for determining further comprises means for selecting the delayed update mode~~
3 based upon a classification of a user making the selected update request.

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1 Claim 32 (currently amended): The system according to Claim ~~[[24]]~~ 23, further comprising:
2 means for connecting to the back-end data source prior to operation of the means for
3 performing; and
4 means for disconnecting from the back-end data source after operation of the means for
5 performing.

Claims 33 - 38 (canceled)

1 Claim 39 (currently amended): A method for improving performance and resource utilization of
2 software applications that interact with a back-end data source to update information stored
3 therein, comprising the steps of:
4 storing one or more objects in a cache for responding to update requests against a back-
5 end data source corresponding to each of the objects, wherein (1) a set of input properties is
6 stored with or associated with each stored object and (2) update logic specifying how to update
7 the back-end data source corresponding to each of the stored objects is stored with or associated
8 with the stored object or a group of stored objects;
9 receiving update requests against the back-end data source for one or more of the objects;
10 checking an update policy to determine an update mode to use for ~~[[a]]~~ each selected one
11 of the update-request requests, responsive to the receiving step;
12 immediately processing the selected update request against the back-end data source if the
13 determined update mode is not a delayed update mode; and

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14 delaying processing of the selected update request against the back-end data source
15 otherwise is the delayed update mode, further comprising the steps of:
16 queuing the selected update request, along with the input properties and values
17 thereof which are to be used for performing the selected update request, as a queued update
18 request on an update queue;
19 detecting a triggering event for performing the delayed processing of the queued
20 update requests, wherein the triggering event comprises reaching a particular count of queued
21 update requests for a selected object; and
22 performing, responsive to the detecting step, the queued update requests.

Claim 40 (canceled)

1 Claim 41 (currently amended): The method according to Claim ~~[[40]]~~ 39, wherein the
2 performing step further comprises the steps of:
3 setting the input properties of a selected object against which the queued update request is
4 to be performed using the queued input property values; and
5 executing the update logic stored with or associated with the selected object, thereby
6 updating the back-end data source corresponding to the selected object.

Claim 42 (canceled)

1 Claim 43 (currently amended): The method according to Claim ~~[[40]]~~ 39, wherein the triggering

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2 event further comprises reaching a particular time of day.

1 Claim 44 (currently amended): The method according to Claim [[40]] 39, wherein the triggering
2 event comprises instead reaching a count of read requests received for ~~an associated~~ a read-
3 access object which is used for responding to read requests and which is associated with a
4 selected one of the objects for which at least one of the update requests is queued.

1 Claim 45 (currently amended): The method according to Claim [[40]] 39, wherein a separate
2 update queue is created for each of one or more back-end data sources to be accessed during
3 operation of the step of performing.

1 Claim 46 (currently amended): The method according to Claim 39, wherein the update policy
2 selects determining step further comprises the step of selecting the delayed update mode based
3 upon a time of day when the selected update request is received.

1 Claim 47 (currently amended): The method according to Claim 39, wherein the update policy
2 selects determining step further comprises the step of selecting the delayed update mode based
3 upon a classification of a user making the selected update request.

1 Claim 48 (currently amended): The method according to Claim [[40]] 39, further comprising the
2 steps of:
3 connecting to the back-end data source prior to operation of the performing step; and

4 **disconnecting from the back-end data source after operation of the performing step.**